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RARA AVIS IN TERRIS  
HOUGHTON

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Maintainers of Mine  
*within the Wapen-  
take of Wirksworth,  
or elsewhere: The  
Author wisheth Hap-  
piness and Prosperity  
in LEAD-MINES.*

**H**Onest Country-men,  
knowing there is no-  
thing extant amongst you con-  
cerning your Liberties, Laws  
and Customs, save only some  
few Written Copies, which  
thousands of Miners and main-

A 2      tainers

by reading now can read  
n : Therefore, that every  
ne that can but read might  
know the Customs of the Mines,  
was the cause I publisht this  
Book, which will much profit,  
and be a ready help to all that's  
concern'd in minerial Affairs;  
in regard you have here in a  
*Vade Mecum*, or pocket Com-  
panion, not only the Liberties,  
Laws and Customs of the  
Mines, which all miners and  
maintainers ought to know;  
but you have also such other  
things, as are, or may be neces-  
sary to be known to such per-  
sons, as are, or may be concer-  
ned

### *Epistle Dedicatory.*

ned in Tryals upon Juries, or  
twenty four men; *Bonum quo  
comunius, eo melius.*

I shall not stand to make  
Apology for the Book, well  
knowing *Nemo enim judice ter-  
tare frustra*; and doubtless this  
may fall into the hands of such  
Criticks, who *Zoilus* and *Mo-  
mus*-like, will be ready to  
speak ill of what is anothers,  
but ever fancying and affecting  
their own; which sort of self-  
conceited Opinionists I do not  
think, neither desire to please;  
But if such rash and hasty Cen-  
surers might be premonisht,  
'tis requisite they sometimes  
admit their judgments the pos-  
sibility of erring. To conclude,

*Epistle Dedicatory.*

'tis thee, honest miner, for  
whom I publisht this, referring  
those that are curious to our  
*Phylosophia Subterranea*, which  
perhaps may be publisht e're  
long: However, in the inte-  
rim, I offer, and not urge, this  
to their uses, whose occasions  
shall require it, and rest a  
Friend to any ingeniously af-  
fected.

From my Lodging in  
*Novemb. 12.* *Warwick-lane*, near  
1680. the Colledge of  
Physitians, *London*.

THOMAS HOUGHTON.

*Ad*

Ad Amicum suum  
valde Ingenium,  
*Thomam Houghton.*

*Perdoctæ sobles salve cordata Mi-  
nervæ,  
Scrutatur Terræ; Carmine lectus  
eris :  
Tu Mineralia Vincis, Tu doctaq;  
Mathesi  
Et, Celi, terræ viscera summa petis:  
Hinc tua fama volat, quoq; spargitur  
undiq; nomen,  
Quaq; capeffisti vadere perge via.  
Nunc RARA AVIS adi, refera  
multumq; revolve  
Magna sub exiguo Corpore Gaza  
latet.*

Robertus Webster.

A 4

To



To his loving Friend *THOMAS*  
*HOUGHTON.*

*Up Muse, besmear the Authōrs head  
with Thus,  
Give Him's right Name, Miners  
Mercurius.  
Who Comet-like, all others doth out-  
shine,  
Within the Sphere or Circuit of the  
Mine;  
Let Miners honour, and their Guide  
Thee make,  
For why? 'tis Thee must be their  
Burning-Drake:  
Therefore, great Meteor, let thy light  
immense,  
Direct all Miners with its Influence;  
Give's Phylosophia, which will stu-  
pifie  
Our Academicks, and doubtless there-  
by  
Thee (RARA AVIS IN TERRIS)  
they'l know  
T' be th' true Nigro simillima Cygno.  
John Howard, next door to the Half-  
Moon in Black-Fryars.*

[1]

At the Great Court Barmoot  
for the Lead-Mines, held at  
*Wirksworth*, for the Soak  
and Wapentake of *Wirks-*  
*worth* in the County of *Dera-*  
*by*, the 10<sup>th</sup> of *October*, in  
the year of our Lord 1665.

The Inquisition of the great late  
Inquest, taken upon the Oaths of,

<i>Ro. Haywood.</i>	<i>Ro. Tipping.</i>
<i>Ro. Sage.</i>	<i>Mat. Latham.</i>
<i>Rich. Luxton.</i>	<i>Hen Coats.</i>
<i>Antho. Cotteril.</i>	<i>John Briddon.</i>
<i>Edw. Weatcroft.</i>	<i>Edw. Bradshat.</i>
<i>John Swallow.</i>	<i>Tho. Daken.</i>
<i>Antho. Gell.</i>	<i>Pet. Rawling.</i>
<i>John Creswel.</i>	<i>Fran. Worthy.</i>
<i>John Topliß.</i>	<i>Edw. Rooper.</i>
<i>George Wittacre.</i>	<i>John Twieg.</i>
<i>Anthony Lowe.</i>	<i>Ralph Häge.</i>
<i>James Holehouse.</i>	<i>John Roose.</i>

A 5

Article

## ARTICLE I.

WE say upon our Oaths, That by the ancient Custom of the *Mines* within the Soak and Wapentake of *Wirksworth*: The *Miners* and *Merchants* at first chose themselves an Officer, called a *Bar-master*, to be an indifferent person betwixt the Lord of the Field, or Farmer, and the *Miners*, and betwixt the *Miners* and *Merchants*; which *Bar-master*, upon finding any new Rake or Vein, did (upon notice given by the Miner, deliver to the first finder two Meers of Ground in the same Vein; each Meer in a Rake or Pipe-work containing 29 yards in length, and in a flat-work 14 yards square; The which two Meers of Ground the Miner is to have, one for his diligence in finding

ding the Vein, and the other for mineral Right; paying the *Bar-master* or his Deputy one Dish of his first Ore therein gotten; and then the *Bar-master*, or his Deputy, is to deliver to the Lord of the Field or Farmer, one Meer of Ground in a new Vein, at either end of the aforesaid two Meers half a Meer of Ground; and then every one in such Rake or Vein, one Meer, or more, according to their taking.

## ART. II.

We say if any Miner, or any other person set on an old Work, then the *Bar-master* or his Deputy is but to deliver him one Meer of ground, on either side his Shaft half a Meer of Ground; for which of mineral Right he is to pay one Dish of his first Ore therein gotten; and the Lord of the Field, or Farmer, is to

A 6 have

have no half Meer in an old Work;  
but every one is to be served ac-  
cording to his taking.

## A R T. III.

We say that no one ought to set on  
an old Work, or ancient Possession,  
without the Bar-master or his De-  
puty and one or more of the *Grand-  
Jury*, or twenty four of the Mine.

## A R T. IV.

We say, according to the custom  
of the Mines within the Wapentake  
of *Wirksworth*, That Grooves, Shafts  
or Meers of Ground, kept in law-  
ful possession, are an Estate of In-  
heritance, and descend to the Heirs  
and Assigns of the Owners; and  
Wives to have Dowry in them.

## A R T.

## A R T. V.

We say, If any man (to the know-  
ledge of the Bar-master or his Depu-  
ty) be lawfully possess'd of a Meer  
or Meers of ground, and does not  
willingly desert the same, but his  
*Stows* are gone by some sudden ac-  
cident, or indirect means, it shall  
not be lawful for any other person  
to take or possess such Meer or  
Meers of ground, till the Bar-master  
or his Deputy set him thereon; and  
the Bar-master or his Deputy, be-  
fore he set any man on such Meer or  
Meers of ground, shall first take with  
him one or more of the *Grand-jury*,  
or four and twenty of the Mine;  
and go to the place where the Pos-  
session, or Possessions, or *Stows*  
stood, for such Meer or Meers of  
ground, and then make open pub-  
lication in the mineral time of the  
day,



day, That the party or parties whose *Stows* stood for such Meer or Meers of ground, are gone, or taken away as aforesaid, that he or they shall (within four days after such publication) come, and make good his or their Possessions for such Meer or Meers of ground; But if the party fail to make good his or their Possession within four days after, then the Bar-master or his Deputy, and the Grand-jury-man, that was at such publication, may set on any other man on such Meers of ground, to work according to custom.

## A R T. VI.

We say, that the Bar-master nor his Deputy, ought to lay forth nor measure any man's ground, till Ore be gotten in the same ground to free it withall; and when the ground is freed, it ought to be measured

sured and laid forth, and *Meer-Stakes* set the same day.

## A R T. VII.

We say, that every one ought to keep his ground in good and lawful Possession, with *Stows* and *Timber in mens sight*; and that *Crosses* and *Holes*, without *Stows* and *Timber*, can keep Possession but three days.

## A R T. VIII.

We say, that all men ought to work their ground truly, and chase their *Stool* to their grounds end; and so each one from *Meer* to *Meer*, according to the custom, unless they be justly hindred by Water, or for want of Wind; and in such cases diligence ought to be used, to gain Wind, and to get out the Water.

A R T.

## A R T. IX.

We say, that the Bar-master, or his Deputy, ought to walk the Mine once a week at least, and where he sees a Meer of ground, which to his knowledge is lawfully possessed, to stand unwrought three weeks together, and might be wrought, not being hindred by Water, or for want of Wind, then he ought, if he can conveniently, to give notice to the parties, that neglect to wor k according to custom ; Then he shall nick the *Spindle*, each week a nick, for three weeks together ; and if it be not wrought within that time, nor borrowed of the Bar-master or his Deputy, then within two days after the last day of the said three weeks, the Bar-master or his Deputy may lawfully set on another man on such Meer or Meers of ground,

ground, to work according to custom ; and if the Bar-master neglect to do his duty herein, he shall forfeit five shillings to the Lord of the Field, or Farmer.

## A R T. X.

We say, that if two several parties or more set Possessions for one and the same thing, claiming for one and the same Meer of ground : Thereupon the party grieved shall complain to the Bar-master, or his Deputy, who shall forthwith bring with him four or more of the *Grand-jury*, or four and twenty, to view the Possessions, and inform themselves the best way they can, who hath the most ancient and lawful Possession for that Meer of ground, and shall settle the same, casting off the other, and cut out the *Spindle* of such *Stoms* as they  
so

so cast off; And if the party whose Possessions they so cast off, think he hath wrong thereby, and think he hath a good Title to such Meer or Meers of ground, he may put a new *Spindle* into his *Stows*; and any time within fourteen days after such casting off, set them on again; thereupon giving the Bar-master or his Deputy four pence, to arrest such Meer or Meers of ground, and so try his Title: But if he set on his *Stows*, and do not arrest within fourteen days after, as aforesaid, he shall incur a fine of fourty shillings upon his head for every such Offence; and the Bar-master or his Deputy ought forthwith to burn his *Stows*, in the mineral time of the day; And then if he sets not on another pair of *Stows*, and also arrest the next day after, his Title to such Meer or Meers of ground shall be deemed unlawful, and to have  
no

no plea for the same in *Barmoot-Court*.

## ART. XI.

We say, that the Lord of the Field, or Farmer, shall at all times hereafter provide and keep, betwixt Merchant, Buyer and Seller, a just and right *Measure* or *Dish*, according to the ancient Gage, and such a number of them, as shall at all times of the year conveniently measure all such *Lead-Ore* as is got in the *Wappentake* of *Wirksworth*; and such *Dishes* ought to be seized every quarter of a year, by the *Brazen-Dish*, in the presence of four or more of the *Grand-jury*, or twenty four; and for a pain every time failing herein, to forfeit 3 s. 4 d.

ART.

## A R T. XII.

We say, that by the said *Dish* or *Measure*, the Lord of the Field, or Farmer, is to take his Lot, which is the 13th. *Dish* or *Measure*, as it is justly and customarily paid; But we say, that smytham nor forested *Ore* hath not (within the memory of man) paid, nor ought to pay any duties, or part, but *Cope* only.

## ART. XIII.

We say, that for the payment of the said Lot, *Miners* within the *Wappentake* of *Wirksworth*, ought to have liberty to work the ground within the *Wapentake*, and to have Timber also in the King's *Wasts* to work their ground withal, and egress and regress from the Highways to their *Grooves* and *Mines*.

A R T.

## A R T. XIV.

We say, that the Bar-master, or his Deputy, ought to lay forth the *Miners* the next way to the Highway, for going and coming to and from their work, and also for carrying to and from their work, the running Water to wash their *Ore* withal.

## A R T. XV.

We say, ( by the custom of the *Mine* ) that all *Miners* and their Servants may wash their *Ore* with Fat and Sieve upon their Works, so that they keep their Fats close covered, and empty their Sludge into some convenient place, within their length or quarter Cord, as the Bar-master, or his Deputy, shall appoint, so that the Cattel of the owners

ners or occupiers of the Land where such washing is, may have no harm.

## ART. XVI.

We say, (by the custom of the Mine within the *Wapentake* of *Wirksworth*) 'tis lawful for all the Liege-people of this Nation to dig, delve, subvert, mine and turn up all manner of Grounds, Lands, Meadows, Closes, Pastures, Moors, or Marshes for *Lead-Ore*, within the said *Wapentake*, of whose Inheritance soever it is, Dwelling-houses, High-ways, Orchards, or Gardens excepted; But if any arable grounds Lands, or Meadows be digged, delved, subverted, or mined, and not wrought lawfully according to the custom of the Mine, then it may and shall be lawful for the Inheritors of the ground so digged, subverted, and

and mined, the same to fill up, at their will and pleasure.

## ART. XVII.

We say, that no person or persons ought to keep any counterfeit *Dish* or *Measure* in their Houses, Coes, or any other place, to measure *Ore* withal, but every one ought to buy and sell by the Bar-master's lawful *Dish*, and no other to be used or had; and every *Buyer* offending herein, shall forfeit for every such Offence forty shillings to the Lord of the Field, or *Farmer*; and the *Sellers* thereof shall forfeit their *Ore*, if it be taken at such time.

## ART. XVIII.

We say, that if any poor *Miner*, or any other poor Person, have *Ore* (under a *Load*) to measure, and the

the Bar-master or his Deputy have notice thereof, and do not (upon warning and request) come to measure the same, then every such person may lawfully take two of his Neighbours, and deliver his *Ore* to whom he will, so that the customary Duties be paid.

ART. XIX.

We say, that the Bar-master, or his Deputy, shall see that measure be indifferently made betwixt the Buyer and Seller; and the Buyer not to touch the *Dish*, or to put in his hand to make measure, on pain to forfeit ten shillings.

ART. XX.

We say, that after the *Ore* is so measured, the Merchant, Buyer, or Miner, that carries away the *Ore*, doth

doth pay to the Lord of the Field, or Farmer, *Cope*, being six pence for every Load of *Ore*, nine *Dishes* to the Load; for the which *Cope*, the Miners or Merchants have liberty to carry away the *Ore*, and sell and dispose of it to whom they please, to their best advantage, without the disturbance of any man.

ART. XXI.

We say, that if any person, or persons, will make any Claim or Title to any Grooves, or Meers of ground, Rake, Vein, or Ore, he ought to arrest the same, according to the custom of the Mine, and the Defendant ought to be bound in a Bond (with sufficient Sureties for him to the Plaintiff) to answer at the next *Barmoot-Court*, to such Actions as shall be brought against him, by the Plaintiff, upon the said

B Arrest.



Arrestment; and after to yield so much *Ore*, or the value thereof to the Plaintiff, if the Defendant be cast, by the Verdict of 12 men; as shall be gotten at such Grooves or Meers of ground, from the time of such Arrest, till such Trial at the *Barmoot-Court*.

## ART. XXII.

We say, that after any Arrest made, the Bar-master, or his Deputy, upon request made, ought to appoint a *Court-Barmoot* within ten days, or as soon as he can conveniently; And if the Plaintiff do not pursue his suit upon the Arrest, he shall then lose six shillings eight pence to the Steward; and a Non-suit shall pass against him: And we say, that a Non-suit is to be of the same effect and validity with a Verdict; and every way to signify as much;

much; and if the Defendant fail to make his defence, a Verdict shall pass against him for his Default.

## ART. XXIII.

We say, whosoever shall be condemned and cast by a Verdict of 12 men; or otherwise, if a Jury be summon'd, and upon calling appear, if the Plaintiff will not go on, and follow his Suit, he shall pay four shillings for 12 mens Dinners: And *Pawns* shall be put in on both parts, into the Bar-master, or his Deputies hands, at the time of the Arrest, or within three days following.

## ART. XXIV.

We say, that the Defendant ought to have six days time at least, before any Court, to prepare himself

self for his Defence; and what Arrests are made within six days next before the Court, the Defendant may, if he please, refuse to answer, and not suffer any loss thereby; and such arrests made within six days, to be void, unless both parties be willing to go on to Tryal.

## ART. XXV.

We say, that the Bar-master, or Steward, ought yearly to keep two great *Barmoot-Courts* on the Mine, one about *Easter*, and the other about *Michaelmas*, within fourteen days before or after the said times; and every three weeks a Court, if need be yearly; If either Plaintiff or Defendant request a Court, he is to keep one within ten days after such request, or forfeit ten shillings.

ART.

## ART. XXVI.

We say, if any Groove, Shaft, or Meer of ground be arrested, all the Ore got or measured at such Groove, Shaft, or Meer of ground, from the arrest to the tryal, is liable to the Arrest; And if the Verdict be found for the Plaintiff, then the Defendant shall pay to him so much Ore, or the value thereof, as shall appear by Evidence was gotten, or measured at such Groove, Shaft, or Meer of ground, from the time of the Arrest, till the Tryal: And when the Bar-master, or his Deputy, makes such Arrest, he ought to take good security for the Ore that is to be measured there, or carried away to any other place.

B 3

ART.

## ART. XXVII.

We say, that honest and able men ought to be summon'd for Jurors, out of every Division within the Wapentake; and to be summon'd as near the Court-day as may be; and of every Division some to serve, unless some just cause be shewed to the contrary.

## ART. XXVIII.

We say, that able fit men, if they be not Miners, if they have parts, and be maintainers of Mines, and known by the Bar-master, or his Deputy, to understand well the custom of the Mine; they ought to serve for Jurors, especially in difficult and weighty matters and causes.

ART. T.

## ART. XXIX.

We say, that one Verdict for wages due to Work-men, shall fully conclude and determine. And for the Title that ariseth by contract, as by Gift, Sale, or Exchange, (or the like) and also for right of Possession, for Shafts or Meers of ground; two of the first Verdicts for one party, shall fully conclude the Title.

## ART. XXX.

We say, that when a Verdict is gone for either party, if he which hath lost will have another Tryal for the Title, he ought to arrest within fourteen days next after the Court, when the Verdict went against him; or else that Verdict shall determine, and fully exclude him

B 4

from

from any further Claim; unless that longer time for workmanship be absolutely necessary to discover the truth: If so, then the party grieved may within fourteen days cause four or more of the Grand-Jury, or Twenty Four, to view the work in question; and what time they think fit for workmanship to discover the truth; that they may allow, giving such their doings (under their hands) in writing to the Bar-master or his Deputy of that Division: And if it proves the allowed time be too short, then the grieved party may again procure four or more of the Grand-jury, or Twenty Four, to view the work a second time; and if they then find that workmanship hath been duly made, and yet more time is requisite, they may give longer time again, in manner as aforesaid: And then if the party grieved arrest not within

within ten days after that time is expired, that Verdict that went against him shall fully conclude and determine the Title.

## A R T. XXXI.

We say that no person ought to sue for Mineral Debt, Ore, Grooves, Trespasses in Grooves, or grounds in variance, but only in the *Barmoot-Court*; and if any do the contrary, they shall lose their Debt and Ore for which they are in controversy, [and shall pay the Charges in Law, and lose all their Grooves, or Meers of ground, and parts thereof to the party grieved, till upon just account, he have satisfaction for all his Charges and Expences in and about such Suits] to the Lord of the Field, or Farmer; Also such as sue out of the *Barmoot-Court*, as aforesaid, ought to have no

Benefit, nor Plea in *Barmoot-Court*.

# ART. XXXII.

We say, no Officer ought, for Trespass or Debt, to execute or serve any Writ, Warrant, or Precept upon any Miner, being at his work on the Mine, nor when the Miners come or go to the *Barmoot-Court*, but the Bar-master or his Deputy only.

# ART. XXXIII.

We say, if two several parties, or more, be Groove-fellows, or Part-owners to one Groove, or Meer of ground, and one or more of the Part-owners will not keep company, nor pay his or their proportional part or parts of all such Workmanship, and other Charges  
and

and Expences as are necessary and conducing to such Groove or Grooves, Meer or Meers of ground: Thereupon the party grieved shall complain to the Bar-master, or his Deputy, who shall take with him two or more of the Grand-jury, or Twenty Four, and speak to the party or parties who neglect or refuse to pay Charges, and keep Company as aforesaid, and give him or them warning to come in within ten days to pay Charges and keep Company with their Part-owners; and if (after warning given) the party or parties refuse to pay Charges, or to come in and keep Company as aforesaid; then the Bar-master, or his Deputy, and the Grand-jury, or Twenty Four, at their meeting next following (unless some just cause be shewed to the contrary) may order the party or parties, that have refused and neg-

lected to pay Charges, and keep company, that he or they shall come and pay Charges, and keep Company with his or their Part-owners: And such Order of the Grand-jury, or Twenty Four is to be binding, as though it was at *Barmoot-Court*.

## ART. XXXIV.

We say, that when a Meer or Meers of ground are wrought under water, and by reason thereof hath stood many years unwrought, and the Owner or Owners of such Meer or Meers of Ground do not use some effectual means to get forth the water, to recover the same; and that the same might be wrought by the means of a *Sough*, or *Engine*, and that for the publick good, but is yet neglected: Thereupon any person or persons, who are minded to disburse and lay forth money, to reco-

recover such Works from water, may, at a great *Barmoot-Court* held at *Wirksworth*, declare such their Intentions, in writing, to the Grand-Jury, or Twenty Four, and they shall take the same into serious consideration; and if they know such works to have stood long, by reason of water, and no effectual means used to win the same; and that the person or persons who desire to undertake to win the same by *Soughs*, or otherwise, to be able men, and like to perfect such a work: Thereupon the Grand-jury, or Twenty Four shall appoint a day (a month after at least) for themselves, and the party that undertakes, and all the Owners of such works, to meet at the place where such works are, and this time of meeting shall be publisht by the Cryer in the great *Barmoot-Court*, that all men may take notice thereof. At such



such meeting the undertakers shall give the Grand-jury, or Twenty four, to understand by what means they intend to lay dry all such works, and to get out the water, for recovering the same; and if the Grand-jury, or Twenty Four, thereupon conceive the way and means they propose is like, and effectual to recover such works from water, so that the publick may have advantage thereby, the Grand-jury, or Twenty Four, shall acquaint the Owners of such works with the Intentions of the undertakers, concerning the recovery of such works from water, and the way and means they propose for the doing of it. And any of the Owners of such works (if they please) may joyn with the undertakers, paying their proportionable parts of the Charge of such *Songhs* or *Engines* as shall be made to recover the same, according

ding to their parts, and enjoy the benefit thereof. And such of the Owners of such works, as shall not (by themselves, or others by their authority) appear at such meeting; or then neglect or refuse to joyn, and pay their proportionable part or parts of charges of such *Songhs* or *Engines* as shall be made and used for the recovery of such works from water, as aforesaid: Thereupon the Grand-jury, or Twenty Four, and Bar-master, or his Deputy, shall have power to dispossess such Owner or Owners from their part or parts, and to assign and deliver possession of such part or parts to the undertakers thereof, as aforesaid; withal, ordering, That the undertakers of such works shall give to the Owners, that refuse and neglect, as aforesaid, such reasonable satisfaction as the Grand-jury, or Twenty Four, shall then think fit.

And

And if it happen, in the carrying on of the business for the recovery of such Water-works, that any difference arise betwixt the Undertakers and the Owners of such works, or any of them, so that the work is obstructed thereby; then the Grand-jury, or Twenty Four, being called together, shall have power to regulate all such difference, whereby the work may be effectually accomplit for publick good.

## ART. XXXV.

We say, that when any man is possessed of a Groove or Meer of ground, and hath found the Vein, and works therein, he ought to suffer his Neighbour, who is the next *Taker*, and shew him the best light and direction he can, which way, and upon what point the Vein goeth: But in case any man  
be

be so refractory as to deny his Neighbour such a courtesie, then he may procure three or more of the Grand-jury, or Twenty Four, to be summon'd, and the Bar-master, or his Deputy, may put them into his Groove who hath the Vein in Work, where they may (by using of a Dial, or some other Skill) shew him that is the next *Taker*, which way, and upon what point the Vein goes, so that he may know thereby where to sink his Shaft to find the Vein; that the Field may be set forwards for the publick good; provided always, that such of the Grand-jury, or Twenty Four, as go into the Groove aforesaid, shall not do any other act or thing, or make any other discovery of such Groove, save only to see which way, and upon what point the Vein goes.

## ART.

## AR T. XXXVI

We say, that where any man is lawfully possessed of a Meer of ground, for any Rake or Vein, and works the same truly according to the custom of the Mine; if any other man shall set *Possessions*, at, or near his *Fore-field*; pretending for a Cross-vein, or some other thing; and by workmanship shall be strongly suspected, to work in the same Vein for which there is another in possession, and truly works the same; thereupon the party grieved may procure the Grand-jury, or Twenty Four, to be summoned to appear at the place in question; They, or so many of them as appear, (being above twelve) shall view the whole work; and if thereupon they find, by their best skill, the *Thing* in all probability, to be one  
and

and the same; and yet for want of workmanship cannot then plainly appear, then such of the Grand-jury, or Twenty Four, as appear and view, as aforesaid, shall give such their Opinions under their hands in writing; withal, ordering who they conceit works wrongfully, forthwith to give the party grieved good security for all the Ore got at the work in question, till time and workmanship make the Truth appear; But if the party who is to give security, refuse to give such security, then such of the Grand-jury, or Twenty Four, as appear and view, as aforesaid, shall (by their Order under their hands) appoint the Bar-masser, or his Deputy, to seize and sequester all the Ore got at the work in question, till workmanship do make the Truth appear, to whom the Vein belongs; and when either party does conceit that workman-  
ship

ship enough is made in it to make the Truth appear, then either of them may procure the Grand-jury, or Twenty Four, to be summon'd again; and such of them as appear, being above twelve, shall view the work in question; if then, by workmanship, it may appear to whom the Ore and Vein belongs, they may order it the same party to whom they conceive it due; and if either party think he hath wrong thereby, he may arrest, and have his Trial for his Right or Title.

## ART. XXXVII.

We say, that no person shall come to any workman that works his ground truly, upon any colour or pretence to claim his ground, to hinder his Work, or to stop the *Field*; but the first Workman shall only

only work, and the Claimer arrest, and take the Law, and the Bar-master shall do him Law truly,

## ART. XXXVIII.

We say, if any Vein or Rake go cross through another Rake or Vein, he that comes to the *Pee* first shall have it, and may work therein, so far as he can reach with a *Pick*, or *Hack*, having a helve three quarters of a yard long, so that he stand wholly within his own checks, when he works such a *Pee*.

## ART. XXXIX.

We say, that when two Veins go together, parted with a Rither, that it is scarce discernable whether it be two Veins, or but one; in this case, so long as the Rither may be

be taken down by firing on the one side, it is to be taken and reputed but for one Vein; but in case the Rither be so thick that it cannot be taken by firing on the one side, and the Veins go so afunder, for half a Meer in length, then they are serviceable to the Miner, as two distinct Veins.

## ART. XL.

We say, that any Miner, in an open Rake, may kindle and light his Fire, after four of the clock in the afternoon; giving his Neighbour lawful warning thereof.

## ART. XLI.

We say, if any Mines, or other person, do under-beat his Neighbours Meer, and work out of his own Length into anothes man's Ground,

Ground, the party so grieved may procure two or more of the Grand-Jury, or Twenty Four, to view such a Trespass, and order the party that hath done the wrong, to give the party grieved full as much Ore as the value thereof, as they conceive is gotten wrongfully, without allowing any charge for getting the same; and the party offending herein shall forfeit for every such Offence five shillings four pence, which fine the Bar-master, or his Steward shall have.

## ART. XLII.

We say, that if any Miner, or other person, doth work, and keep lawful possession of any Groove, Shaft, or Meer of ground, according to the custom of the Mine; If any person or persons (by day or night) cast in, or fill up such Shaft,

Shaft, Groove, or Meer of ground, however they shall be wrought; every such person offending herein shall forfeit for every such offence ten pounds, the one half to the Lord of the Field, or Farmer, and the other half to the Bar-master, or Steward; and shall pay the party so much as will make good the work again.

## ART. XLIII.

We say, that if any person or persons shall at any time go to any Gentleman, or other person, and give, sell, or exchange any part or parts of a Groove, or Meer of ground in variance, for maintenance; every person so offending shall thereby lose his Groove, or Meer of ground, or part thereof in variance; and the Taker or Buyer shall forfeit ten pounds to the Lord of the Field, or Farmer. ART.

## ART. XLIV.

We say, that if it happen that any Miner, be killed, or slain, or damped upon the Mine, within any Groove, neither Escheater, Coroner, or any other Officer ought to meddle therewith, but the Bar-master, or his Deputy.

## ART. XLV.

We say, that no person ought to bring any unlawful Weapon to the Mine; and for every rime so doing, to forfeit 3 s. 4 d. to the Steward, or Bar-master: And if any make an Assault or Fray on the Mine; every such person ought to forfeit for every such offence 40 s. and for every Bloud-shed against the Peace, 5 s. the one half to the Lord of the Field, or Farmer, and the other  
C half



half to the Bar-master, or Steward.

# ART. XLVI.

We say, that every man that hath a Wash-trough, ought to have seven foorts about the same ; and if any person dig, delve, or shovle in the said Trough within the said space, he shall forfeit for every such Offence 12 *d.* to the Steward: Also we say, that no person ought to dig, delve, or shovle near any man's Bing-place, upon pain to forfeit 12 *d.* for every such Offence.

# ART. XLVII.

We say, that no person or persons ought to cave upon any mans ground except the Owner be present on the ground, on pain to forfeit the Ore they get to the Owners of such ground, if they be taken: And also

so six pence to the Lord of the Field, or Farmer, so oft as they shall be taken therewith. Also, no Purchaser ought to stop him, or any Miner, from any Wash-trough, at any time, on pain to forfeit for every such Offence, 12 *d.* to the Lord of the Field, or Farmer: Also no Caver ought to purchase in any man's ground, before eight of the clock in the morning, nor after four in the afternoon, on pain to forfeit for every such Offence, 12 *d.* to the Lord of the Field, or Farmer:

# ART. XLVIII.

We say, that if any person or persons feloniously take away any Ore or other Materials from any Groove, Shaft, or Meer of ground, Houses, Coes, or smilting Houses, or elsewhere, if it be under the value of 13 *d.* half peny ; the

Bar-master, or his Deputy, shall punish the Offender in the Stocks, or otherwise, as is fit for such Offenders to be punished: But if the Ore or other Materials be above 13 d. half penny, we say 'tis Felony.

## A R T. XLIX.

We say, that every Bar-master, or his Deputy, ought to have a pair of Stocks, at some convenient place within his Division; the same to be built at the charges of the Lord of the Field, or Farmer; by the benefit arising out of the Fines; and such persons as swear, curse, or commit any other Misdemeanours on the Mine, fit to be punished in the Stocks; the Bar-master, or his Deputy, shall punish such Offenders, any time under the space of twelve hours, as the Offence shall require.

## A R T.

## A R T. L.

We say, that no Miner ought to be fined or amerced by the Steward of the *Barmoot-Court* for his not appearing there, unless he have lawful warning; But if lawful warning and summons be given, and the Miner fail to come and appear, according to custom; the first time is 2 d. and so at every Court (if occasion ensue) is double the same, till it come to 5 s. 4 d. whereof 5 s. is due to the Lord of the Field, or Farmer, and 4 d. to the Steward: And in case twenty four Miners be summon'd on a Jury, for a Trial betwixt party and party, to appear at the *Barmoot-Court*; if there appear not 12 of them, whereby to have a full Jury, then all such as fail in appearing herein, shall be fined, as the Bar-master, or Steward, pleases, in

C 3 any

any sum not exceeding 10*s.* provided always, the have lawful summons, and be able of Body to come.

## ART. LI.

We say, that if any Groove, Shaft, or Meer of ground be in controversy, and the Grand-jury, or Twenty Four, be called to view that Shaft or Meer of ground, or to do or perform any other duty concerning the same, and thereupon make an Order, and give their opinions under their hands in writing, concerning such Groove, Shaft, or Meers of ground in controversy: then such Order, or Opinion, as the Grand-jury, or Twenty Four, or part of them make, being above four, may and ought to be produced in the *Barmoot Court* at the Trial, and there openly read, and shewed to the Jury, that they may  
take

take notice thereof as they think fit.

## ART. LII.

We say, that if the Grand-jury, or Twenty Four, for the Mine, or part of them, be (by the Bar-master, or his Deputy) called to view any Work within ground; or to do, or perform any other Office, or Duty, concerning these, or any other Articles, for the custom of the Mine; if any person or persons resist, or hinder them therein, every one so offending shall forfeit for very such Offence; *℥* the one half to the Lord of the Field, or Farmer, and the other half to the Bar-master, or Steward; And if any resist the Bar-master, or his Deputy, he may, if need be, call any Miners to assist him, and the Grand-jury, or Twenty Four, or part of them; And if  
any

any Miner neglect or refuse herein, he shall forfeit for every such 5 s. to the Lord of the Field, or Farmer.

## A R. T. LIII.

We say, that the Bar-master, or his Deputy, or the Steward, ought to levy and collect all Fines and Forfeitures, due by custom of the Mine; and where any person hath not Ore to discharge the same, nor is not otherways able, or willing to pay such Fines and Forfeitures; then the Bar-master, or his Deputy, shall (for every such Offence) punish every such person in the Stocks, to sit there twelve hours pining, with a paper on his Back, shewing for what Offence he sits there; But in case the Bar-master, or his Deputy, or the Steward, do not henceforth levy and collect all Fines and Forfeitures, due by the custom of the

the Mine, nor punish such Offenders in the Stocks, as are fit to be punished; they shall forfeit for every such neglect 5 s. to the Lord of the Field, or Farmer.

## A R. T. LIV.

We say, if any Miner or Miners, or any other person or persons, be possessed of a Meer or Meers of ground, or part or parts thereof, and work it truly, according to the custom of the Mine; if there be any person or persons that shall or will make Claim or Title to the same, or any part thereof; that he or they shall come and make their Claims (either by themselves, or by some Agent employed by them) before the Bar-master, or his Deputy; and within six months after the same shall be in workmanship; and if denied of what he or they shall

C 5. claim,

claim, he or they must arrest within fourteen days after the said claim and denial, or else his or their Title shall be deemed unlawful, and to have no plea for it in the *Bar-moot-Court*.

## ART. LV.

We say, whereas we find by daily experience, that great abuses, and many inconveniencies do arise, by persons taking part on both sides, and only putting in their *Pawns*, and will neither maintain with Plaintiff nor Defendant of their necessary Charges; and they so refusing to pay, poor men are many times utterly undone and overthrown. Whereupon we order and agree, (that where any controversie shall happen about any Groove or Grooves, Meer or Meers of ground in question) where such suit ariseth,  
if

if any person or persons claim any particular part or parts of a Meer of ground in question, where such suits ariseth; if any person or persons make claim on both sides, and would only defend his or their part or parts, by putting in his or their part or parts of *Pawns* on both sides. We say, that it shall not be sufficient for any person or persons to defend his or their part or parts by such means only; but he or they must either take to the Plaintiff or Defendant, to defend his or their part or parts, according to the custom of the Mine; that is to say, he shall pay his or their part or parts of Charges, as shall be needful to make the Truth appear, in trying of the Cause or Causes, as well as putting in their part or parts of the 4 s. 6 d. for the *Pawn* or *Pawns*; and Charges being lawfully demanded of such, before the Bar-master of the Liber-

ty, and one or more of the Grand-jury, or Twenty Four; if the party or parties of whom expences in such Suits and Tryals is demanded, as aforesaid, do not pay the same charge within four days after it is lawfully demanded; then such party or parties, refusing or neglecting to pay the same after such demands, shall forfeit his or their part or parts to the parties grieved, to be equally divided amongst them, according to their proportionable parts.

## ART. LVI.

We do order and say, that if any person that works for wages at any Groove or Grooves, Shaft or Shafts, Meer or Meers of ground; within the said *Soak* and *Wapentake*, and shall have his or their wages wrongfully detained or withheld from him or them, by the Owner or Owners.

ners Servant, or Agents, at any of the said Grooves, Shaft or Shafts, Meer or Meers of ground; that then, if such person or persons, from whom such wages shall be due, or from his or their Servants or Agents imploy'd to mannage their Mines, do not well and truly pay such wages as shall be due to any Workman or Servant, within ten days after an account given, and demand made of such person or persons Servant or Agents; that then in such case, the Workman or Servant who shall be behind in arrear, and unpaid, as aforesaid, may arrest, where such work was done, or eliewhere, within the said *Soak* and *Wapentake*, his or their part or parts of Ore, or other Materials, where such person or persons Servant or Agent (doth not pay as aforesaid) are concerned, or have any part or parts thereof, and so bring it to Tryal at the next *Bar-*  
meet-



*moot-Court*; And if such person or persons, Servants or Agents, Defendant or Defendants shall be cast, and condemned by the Verdict of 12 men; then such Defendant or Defendants shall pay all such wages forthwith, which shall be given in damage, and 10 s. over and besides, for and towards the Costs of such Workmen or Servants, Plaintiff or Plaintiffs, in the recovery of such just wages, if their Ore be sufficient under arrest to defray the said charge; but if not, and such Defendant or Defendants refuse and neglect still to pay such wages and charges, as aforesaid; then the Bar-master of the Liberty where the said Defendants have any Grooves, shall have power to levy the same by Distress and Sale of the Defendant or Defendants Ore, or Mineral Materials, if any; or otherwise, he shall deliver all his or their Grooves, or parts thereof,

thereof, to the Plaintiff, to work until the Cost and Damages be fully paid, with all Charges in working the same: And the Bar-master shall not neglect this present *Article*, on pain to forfeit (to the King, or his Farmer) 5 s. 4 d. and to the party grieved, 5 s. And if the Defendant or Defendants shall contemn or disobey this *Article*, or hinder the *Bar-master* in the discharge of his Duty, that then every such Offender shall forfeit for every such Offence 20 s. to the Kings Majesty, or to his Farmer.

## ART. LVII.

Also we order and say, that from henceforth, when any person or persons shall complain at any great *Barmoot-Court*, for want of Company and Charges, that such Complainants shall have a just Bill of Charges

Charges (if such can be had,) annexed to the Bill of Complaint; which the Twenty Four shall have power to determine: Or, at least; he or they shall declare upon his or their Oaths, to the Grand-jury, or Twenty Four, the gross sum or sums of Money, at such Groove or Grooves where such Part-owners are complained against, for want of Company, and Charges, as the said Part-owners shall be behind and in arrear; which sum or sums shall be set down in the Order or Verdict of the Grand jury, or Twenty Four; And if such Sum or Sums be not paid into the respective Bar-master's hands (for the use of the said Complainants.) within ten days after warning given them; then the Bar-master may and shall deliver Possession, according to the said Order: But if the person or persons complained against, or their Agents, be not.

not resident within the *Soak* and *Wapentake* of *Wirksworth*; or if upon diligent enquiry made by the Bar-master, within twenty days after the said Order to him delivered, that such person or persons cannot be found to be resident, nor his Agents, as aforesaid; that then (in such case, the Bar-master may take with him one or more of the Grand-jury, or Twenty Four, and go to the Groove or Grooves, Meer or Meers of ground, where such Company and Charges are wanting; and there in the Mineral time of the day, openly declare, That such person or persons shall come in, and keep company, and pay such charges, as is contained in the said Order, within ten days after, or lose his or their part or parts. And if such charges be not paid according to the said Order, then the Bar-master, or his Deputy, may, and shall

shall deliver possession, according to the said Order, to the said Complainants: And the Bar-master shall not neglect his duty herein, on pain to forfeit 10*s.* to the King or his *Farmer*.

## A R T. LVIII.

We say, that no person or persons shall lett, hinder, or deny the Bar-master and Twenty Four, or any of them, by firing, or any other ways or means whatsoever, from going into any of their Grooves, Shaft or Shafts, Meer or Meers of ground, to view and see whether any wrong or trespass be committed between party or party: Nor for plummig and dialing in any of their Grooves, Shafts, or Meers of ground, for the end, and setting streight of matters in controversie, on pain of every one so offending

to forfeit for every such offence, 40*s.* of good and lawful *English* money, whereof, 20 to the Kings Majesty, or his *Farmer*, and the other 20 to the party wronged or grieved; provided always, that the Bar-master and Twenty Four, or any two or more of them, come at lawful and convenient times of the day.

## A R T. LIX.

The Grand-jury or Twenty Four for the Body of the Mine, do order and say, that from henceforth, every Miner and Maintainer of Mines, within the *Soak* and *Wapentake* of *Wirksworth*, shall prefer their Bills of Complaint at every Great *Barmoot-Court*, against their part-owner or part-owners, Groove fellow or Groove-fellows, in open Court, during the time of the Stewards sitting, and not after any adjourn-

jourment; to the end that every person concerned, or against whom any Bill is preferred, may have legal Proceedings, in open Court, according to the Custom of the Mine.

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*The End of the First Book.*

THE  
Second B O O K.

The Form of a Bill of Complaint,  
put up at the Great *Barmoot-*  
*Court.*

At the Great *Barmoot-Court* held at  
*Wirksworth*, April 12. 1681.

**J**ohn Woodhave, and his Groove-  
Fellows, complain themselves to  
this Court, against William Holdfast  
and Robert Non-pay, or any one  
that claims under them, or either of  
them, for not coming in and keeping  
company with them at the Old man's  
Groove, on the Cole-Hills, in the pens  
Rake, being within the Liberty of  
Wirksworth, and Jurisdiction of this  
Court; and for not paying the sum of  
4<sup>l</sup>. which is due for them to pay; be-  
ing

ing 40s. apiece for either of their eight parts to pay ; And therefore prays relief.

The Form of a Cross-bill, at the same Court.

At the Great Barmoot-Court held at Wirksworth, for the Soak and Wapentake of Wirksworth, Apr. 12. 1681.

Whereas John Woodhave, and his Groove-Fellows, have complained themselves to this Court, against William Holdfast, and Robert Non-pay, or any that claims under them, or either of them, for not coming in and keeping company with them at the Old mans Groove on the Cole-Hills, being within the Liberty of Wirksworth, and Jurisdiction of this Court, and for not paying the sum of 4l. which they say is due for them to pay, being 40s. apiece for either of our eight parts ; We the aforesaid William Holdfast, and Robert Non-pay,

pay, do hereby declare to prove the payment of the aforesaid 4l. being 40s. for either of our eight parts ; And therefore pray to be dismissed.

At the Great Barmoot-Court held at Wirksworth, Apr. 12. 1681.

The Names of the Jurors, and their Verdict upon the aforesaid Bill.

John Hill.	Robert Letslip.
Anthony Wood.	William Castby.
William Ward.	Adam Smoker.
William Stone.	Thomas Sheppard.
Henry Stafford.	Anthony Long.
Adam Bell.	Richard Short.
Clement Clough.	Gervis Standby.
Thomas Twigg.	John Hanger.
Robert Stand.	Abraham Woodwit.
William Winkat.	Samuel Wagstaffe.
Henry Neerheed.	Elias Pool.
Jose. Knowsnot.	Martin Spenser.

We

We the said Jurors, being elected, sworn and charged, do (upon our Oaths) order and say, That William Holdfast, and Robert Non-pay, or any one that claims under them, or either of them, shall come in and keep company with John Woodhave, and his Groove-Fellows; and shall pay the sum of 4*l*. being 40*s*. apiece for either of their eight parts to pay, which they are behind and in arrear, at the Old mans Groove, on the Cole-Hills, being within the Liberty of Wirksworth and Jurisdiction of this Court, within ten days after lawful warning given, or publication made, according to the Article, or lose their parts.

Then you must return the Cross-Bill *Ignoramus*.

The Form of a Bill at the small Court *Barmoot*, for tryal of Titles.

At the small Court *Barmoot* held at — the 13<sup>th</sup>. day of Apr. 1681.

Edward Wood, and his Groove-Fellows,

Fellows, complain themselves to this Court, against James Wilde, and his Groove-Fellows, for unjustly entring into, and detaining from the complainants one Founder-meer of ground in a Cross-rake, discovered out of the great White Rake, within the Liberty of Crumford and Jurisdiction of this Court (on Crumford-Moor) and also one First-Taker-Meer of ground Eastward, or a Possession for a First-Taker-Meer; and for getting therein, and carrying away, One thousand Loads of the Plaintiffs Lead-Ore, and converting it to the Defendants own use, to the Plaintiffs Damage of a Thousand and fifty Pounds; And thereupon they bring their suit, and crave relief.

The Defendants appear, and plead the 6 months Article in Bar.

Jurors	E. D.	A. B.	F. T.
Names.	E. W.	R. C.	A. T.
	A. H.	H.	T. R.
	H. C.	W. F.	

D

Verdict.

*Verdict.* We the said Jurors, being elected, sworn and charged to say the Truth in the premises, upon our Oaths say, That the Defendants are not guilty of entring into and detaining from the Complainants, one Founder-meer of ground in a Cross-Rake, discovered out of the great white Rake, within the Liberty of *Crumford*, and Jurisdiction of this Court; (on *Crumford Moor*), nor for entring into one First-taker-meer Eastward, as in the Bill is set forth. Therefore (according to several Customs and Articles used within the said *Soak* and *Wapentake*) upon our Oaths do further say, That the Complainants shall pay 4*s.* for 12 mens Dinners, &c.

The Form of a Bill put to the Twenty Four, when called to view a ~~Bill~~ in question.

William

William Fainwood, and John Hayeall, and their Grove-fellows, to the Grand-jury, or Twenty Four, for the *Soak* and *Wapentake* of *Wirksworth*; being called to the *Gang-Rake*, on *Middletown-moor*, within the Liberty of *Middletown* aforesaid, the 16th. of April, 1681.

You are desired to go down at the Hedge-shaft, and so through the Drift, and down the Turn, and then through the Drift at the Turn-foot, and so through the King's half Meer, then through the hole at the Rither point into *Bates* work, and so up his Turn and Shaft to the Day, and to give your opinions, whether it be not all one and the same Vein.

Then as many as judge it to be one and the same Vein, write their opinions, if they exceed 12.

D 2

Some

*Some Examples of Dialling.*

**H**AVING provided your self of a *Dial* in a square Box, or a long-square Box, which is better; and also of a 2 foot Rule; and a String or Cord with a Plummer at the end: Suppose you be desired, or (to try your own skill) would know the exact depth of a Hading Shaft and Turn, and how far they are driven in that Meer of ground to an inch. First cause some one to go down the Shaft, then let your Cord or String down after him as far as you can, till it touch somewhere on the side, observing the most convenient place at the *Stons*, where the String will go down deepest and not touch the sides, and where the Plummer touches the side, bid him make a mark at the end thereof; Then the String hanging there, apply the side of your *Dial* thereto,

thereto, as near crossing the Rake as you can judge by the hading below, and observe what point the Needle stands on, which here you may suppose to be 52. and this point you must keep for your square; then pull up the String, and measure it, and set the length thereof down in Rules and Inches, under the word *Depth*, as you may see in the Example following, which you may suppose here to be 24 Rules, and Inches 00; which when you have set down, and the point 52 directly over against it; then go down to the place where he made the mark in the Shaft, and because your Shaft hades, put one end of your Rule to the place where he made the mark, and lay the Rule cross into the Shaft; then apply your *Dial* to the edge of the Rule, and wave the *Dial* and Rule up and down together till you see the Needle stand upon 52, your

D 3      square



Square point; then from the most convenient place of your Rule, (whether it be at the end, or in the middle, where the Cord will go down the deepest and not touch the sides) there hold the Cord, and where it touches the side at the end below, there bid him make a mark; then (observing what Inches it lies against at the Rule, as here at 22) pull up the Cord, and measure the length thereof, from the Rule to the mark below; not forgetting to hold your finger fast upon the Cord, which you may suppose to be 16 Rules; which (because you are plummimg) must be set down under *Depth*; Then, having set down your point 52, and the 22 Inches in their respective places, as in the Example following appears, go down to the place where he made the last mark; and putting one end of your Rule thereto, lay the other into the

the Shaft, and apply your *Dial* to the edge of the Rule, and wave them up and down together as you did before, till you see the Needle stand upon 52, the Rule and *Dial* lying close together, let down your Cord as far as you can, till the Plummert touch the side below, holding the string at the middle or end of the Rule, or where you see it will go down deepest, and not hang on the sides; then bid him make a mark below, where the Plummert touches the side; which done, pull up the Cord, and measure the length, first observing at what Inches of the Rule you held it; and so set down your *Depth*, *Point* and *Length* in their right places, which here you may suppose to be 26 Rules and 14 Inches, point 52, and the cross Length taken thereon, 1 Rule and 2 Inches: Then go down to the mark he last made, and putting one

D 4.      end

end of the Rule therein, lay the other cross, as before, and apply the side of the *Dial* to the edge of the Rule, and wave them up and down till the Needle stands on 52; then let down the string to the Shaft foot, and bid him make a mark below, observing that the string touches nowhere on the sides, betwixt you and the mark he makes at the Shaft foot; so observing what Inch the string lies against at the Rule, pull it up and measure it, how many Rules it is, which you may suppose here to be 28 Rules and 22 Inches, which set down, and the point 52, and also the number of Inches where the string lies upon the Rule, which here is 18 Inches; And so you have finished the Shaft: Then, going down to the Shaft foot, hold the *Dial* where the mark was made, and set the Needle upon 52; and if there be any occasion to take a short cross length,

length, whereby to give you better liberty to take a long length in the drift; then take the short length, the Needle standing upon 52, apply the string parallel to the side of the *Dial*; and having made a mark at the end of the short length, measure how many Rules and Inches it is, (and set it down) which you may suppose here 1 Rule and 10 Inches: then set down the point directly against it, by which you took that length as 52; which done, give him that is with you, the end of the string, and let him go back into the Drift as far as he can, till the string begins to touch somewhere on the side in the middle; and then holding one end of the string in the mark you made, when you took the short length; observe that the string touches nowhere betwixt him and you; then apply the side of your *Dial* to the string, taking notice  
D-5 that

that the *Dial* and string lie streight one with another, and so take the point the Needle stands on, which here you may suppose to be 36; then let him that is at the other end, either make a mark on the side, or drop a stone to the sole of the Drift, as you find occasion; which done, draw the string back, and measure it, and set the length thereof down in Rules and Inches, which you may here suppose to be 22 Rules and 8 Inches, and over against it the point 36: Then go to the place where he dropt the stone, or made the mark, and laying the Rule or String cross, one end being in the mark, take a short length [as you find occasion] setting the Needle upon 52; which done, set down the point, and this short length over against it, which here you may suppose to be 10 Inches; having so done, and made a mark, or dropt

a Plum at the end of these 10 Inches; this short length will give you liberty to take a long length forwards in the Drift: So let him take the string, and go as far backwards as he can, till the string almost touches somewhere in the middle on the side; then (holding one end in the mark you last made, when you took the short length) stretch the string streight, and apply the side of the *Dial* to the string, and take the point the Needle stands on, which here you may suppose to be 36; so set down the point, and bid him make a mark at the end; then pull back the string and measure it, setting down the length directly against the point you last took, which you may here suppose to be 24 Rules and 14 Inches; and that to reach to the Turn-head. So being now come to the Turn-head, you must fall to plummig again.

Therefore set the Needle upon 52, your old Square, and if there be any need, to take a short length, whereby to give you liberty to plum the deeper in the Turn, then you must take it; so bidding him go down the Turn, let the string down after him, and where it touches on the side, let him make a mark; you holding one end of your Rule in the mark that was made at the Turn-head, lay the edge of the Rule to the side of the *Dial*, and wave them together till the Needle stands upon 52; then set down that short length, which you may here suppose to be 8 Inches, and pull up the string and measure it; which you may here suppose to be 28 Rules and 6 Inches; set it down, and the point 52 also; which done, go down to the mark he made; and because the Turn hades, put one end of the Rule in the mark, and lay the other cross

cross into the Turn; so put the side of the *Dial* to the edge of the Rule and wave them together, till the Needle stands upon 52: Then let the string down to the Turn-foot; if it will not touch the sides betwixt the Turn-foot and you; so holding the string at the end of the Rule, set down this short length, which is 1 Rule, and the point 52; and bidding him make a mark at the Turn-foot, measure the length, which you may here suppose to be 30 Rules and 2 Inches; And so you have plummed the Turn.

If you have any further to Dial, observe to take your square point, where there is occasion; for if you omit taking your square, you will lose your self in the exactness of the grounds length, sometimes making it more, and sometimes less than really it is, and so commit great error, when you come to Dial it above ground:

ground: You must also take care that you hold your Rule level, when you take your cross lengths; and also your string when you take lengths in Drifts; and by that means you will have the exact depth: You must also observe that your Rule and string lie parallel with the edge of your *Dial*; that is, equally at both ends; or else you will miss in taking the true point. Under ground the *Dial* is guided by the string; but above ground the string is guided by the *Dial*.

*Example.*

*Example.*

Depth.		Points.	Length.	
Ru.	Inch.		Ru.	Inch.
24.	— 00.	— 52.	— 00.	— 00.
16.	— 00.	— 52.	— 00.	— 22.
26.	— 14.	— 52.	— 01.	— 02.
28.	— 22.	— 52.	— 00.	— 18.
00.	— 00.	— 52.	— 01.	— 10.
00.	— 00.	— 36.	— 22.	— 08.
00.	— 00.	— 52.	— 00.	— 10.
00.	— 00.	— 36.	— 24.	— 14.
28.	— 06.	— 52.	— 00.	— 08.
30.	— 02.	— 52.	— 01.	— 00.

That is 152 Ru. — 44 Inch.

And the Rule containing 2 Foot, it makes in all 307 Foot and 8 Inches for the depth of the Shaft and Turn; which by Reduction makes 51 Fathoms, 1 Foot and 8 Inches, for the true depth of that Mine.

*Example.*

44 Inches make 3 Foot 8 Inches; which set below the 304; and added makes 307  $\frac{8}{12}$

add

	add	152.
		152.
Sum in single		304. Foot.
	3 $\frac{1}{2}$ add.	
		307. Foot.

Now, if you would know how much your Shaft and Turn haded, you must add up the lengths that stand against your square-point 52. As for Example.

Rules	Inches
00.	22.
01.	02.
00.	18.
01.	10.
00.	10.
00.	08.
01.	00.

Rules 03. 70. Inches.

Which by Reduction makes 11 Foot and 10 Inches; and so much your Shaft and Turn hades. To know the exact length you have driven in your ground, without laying

laying it forth above, you must add up the Rules and Inches that stands under the word *Length*, against your by-points; which in this Example is only *Rules* 22. and 8. *Inches*.

and 24. and 14.

That is, Rules 46. and 22. *Inches*.

Which by Reduction is 93 Foot and 10 Inches; which makes 31 Yards and 10 Inches you have driven; But if you are to dial and lay it out above ground, set the *Dial* upon the point 52; and looking in your Note for 22 Inches, which was the first length; put one end of the Rule to that place of the *Stows* where you held the string when you began to plum the Shaft; the Rule lying to the side of the *Dial*, and the Needle standing upon 52, make a mark at 22 Inches upon the ground; and so you have done the first point: And in like manner you must do all the rest, if you go over these

these points singly, one by one; but because here is several square points before you come to any by-point, that goes as the Rake goes; therefore you may take all these square points together, first adding their lengths up, and knowing how many Rules and Inches they make: As for Example.

	<i>Rules.</i>	<i>Inches.</i>
The first point is	00.	22.
The second point is	01.	02.
The third point is	00.	18.
The fourth point is	01.	10.
<i>Sum is</i>	2.	52.

Which by Reduction makes 4 Rules and 4 Inches; that is, 3 yards wanting 8 Inches, and so much your Shaft haves; Therefore if you first measure out so much upon your Cord, and hold one end at the same place on the *Stows*, and give him the other end to go forwards with; then the side of the *Dial* lying streight

streight with the string, and the Needle standing upon 52, bid him make a mark there; and so you have taken all the 4 points together, and found the mark above ground, which he made at the Shaft-foot: Then go to the mark he made, and looking in your Note what your next length is, (which is 22 Rules and 8 Inches) measuring out so much upon your Cord; let him go forwards with one end, and cause some one to hold the other end in the mark he last made; then look in your Note, for your point over against that length, which is 36; so setting the Needle upon 36, let him that has the Plummet-end bring the Cord to the side of the *Dial*, you standing some distance from him that holds the other end in the mark: Then (the Cord lying exactly even with the side of the *Dial*, and the Needle standing upon

on 36) bid him make a mark at the end of the Plummet; and so you have done that length; Go then to the last mark, and put one end of your Rule in it, and let the Needle upon 52, laying the edge of the Rule to the *Dial*, the length being but 10 Inches, make a mark there; Then look in your Note for your next lengths which is 24 Rules and 14 Inches; which measure out, and let him go on with the string, causing the other end to be held in the last mark; and setting the Needle upon 36, the point over against that length, bid him wave the Cord up and down till it lies exactly freight with the side of the *Dial*; then bid him make a mark; so you have done that length. Lastly, because the other 2 lengths are both to be taken upon one point, and there being no other by-point betwixt them, therefore you may add the lengths

lengths together (and take them at once) which is 1 Rule and 8 Inches, the Needle standing upon 52; the end hereof is the place above ground directly over the mark you made at the Turn-foot.

Now, to know whether you have dialled this exactly or no (without going over it again) first add all your square lengths together: As for Example.

<i>Ru.</i>	<i>Inch.</i>
00.	22.
01.	02.
00.	18.
01.	10.
00.	10.
00.	08.
01.	00.

*Sum is* 5. 22.

Which conveyed into Feet makes 11 Foot 10 Inches; and so much your Shaft and Turn-hades, and declines from the place you first begun to plum at the *Stems*: Then add up the



the lengths you took Rake-ways,  
which was only 22. *Ru.* 08. *Inch.*

and	24.	14.
	26	22

Which by Reduction is 93 Foot  
and 10 Inches, or 31 yards and 10  
Inches: so taking your Rule and  
measuring out the 46 Rules and 22  
Inches; give him the plummet-end  
to go Rake-ways, causing some one  
to hold the other end at the place  
on the *Stows* where you first began  
to plum; then go you to the middle  
of the string, and setting the Needle  
upon 36, bid him wave it up and  
down, till you see the string lie ex-  
actly streight with the side of the  
*Dial*, then bid him make a mark at  
the end: go to this mark, and mea-  
sure out your square length, which  
in all was 5 Rules and 22 Inches;  
give him the end, holding the other  
end in the mark, set the Needle up-  
on 52, bid him wave the string up  
and

and down, till it lie parallel with the  
Box: Then bid him make a mark:  
And if this mark hit the mark you  
made when you dialled it before;  
you have done the work exactly,  
or else you have committed some  
Error.

Note, this Rule always holds  
true, when you take square lengths,  
and your lengths forward, Rake-  
ways, or any ways, by one point:  
As here you took by the point 36.

*How to plum Shafts and Turns that  
bade, and beat into the end.*

First, let down your Cord as far  
as you can, holding it at the  
most convenient place on the *Stows*,  
where it will go down deepest;  
and where the end touches below  
bid him make a mark: Then apply  
your *Dial* to the side of the Cord,  
(whilst it hangs there) and take  
that

that point you judge to be the nearest crossing the Rake for your square point, which here you may suppose to be 48; set the point down, pull up the string and measure it, which suppose here to be 26 Rules and 8 Inches; set them down: Then go down to the mark he made, put one end of the Rule therein, laying the other cross into the Shaft, apply the *Dial* to the edge of the Rule, the Needle standing upon 48, let down the Cord, (which by reason that the Shaft beats much one way, the Plummet will fall upon the end) and where it touches the end bid him make a mark, observing what Inches of the Rule you hold the string at, which suppose here to be 18; set them down, and the point 48 also; Then go down to the mark he made in the end of the Shaft, and putting one end of your Rule or string (whether you find more

more convenient) in that mark, lay out the other end towards the other end of the Shaft, and take the nearest square point you can to 48; which here suppose to be 32; make a mark at the end of the string, in the other end of the Shaft, if you take it quite through; but if you take it half way by the Rule, then perhaps the Rule may touch the lying-side, and then you must make a mark there, the Needle standing upon 32, and set down the length taken upon that point; and so afterwards take a cross length from that mark upon your square 48; but if you take it quite through the Shaft, to give more liberty to plummet deeper the next time; then measuring it, set down the length, and the point 32 over against it, which here you may suppose to be 2 Rules and 8 Inches; which done, hold one end of the string in that mark  
E you

you made in the end of the Shaft, and let down the Cord as far as you can, till it either touch the side or end of the Shaft; which here you may suppose to touch both end and side in the corner of the Shaft; bid him make a mark there: Then pull up the Cord, and measuring it, set it down under *Depth*, which you may suppose to be 8 Rules and 10 Inches: And here you are to take no point, this being only a plum: Then go down to the mark, and put one end of the Rule therein, and lay the other against the *Wough*, lengthways of the Shaft, and apply the *Dial* to the side of the Rule, the Needle standing upon 52, make a mark at the end of your Rule, or where you see most convenient; so counting the Inches, set them down, and the point 32, which here suppose to be 23 Inches: But if it chance, when your Rule lies to the

the *Wough*, you cannot take the point 32 exactly; In such case, put the end of the Rule 3 or 4 Inches, or more or less, as you see convenient, towards the hanging side, but be sure it be level with the same mark, and then set down so many Inches for a length as you judge it to be, and over against the square point 48: or if it happen that the *Wough* flies back, so that the Rule needs not touch it, yet keep the Rule and *Dial* together, the Needle standing upon 32, set down that length you think most convenient to take, and then fall to plumm-ing again: And if your Plummet falls upon the end of the Shaft, or upon both end and side, as before, yet take your length upon the point 32, by help of either of those ways you last took it; that is to say, by shifting your Rule or String something nearer the hanging side, taking

king care to set down those Inches you so allow against your Square point: But if it falls upon the side, and the Shaft hath left off under-beating, and goes streight, only hades, then lay your Rule cross into the Shaft, and take your length upon the square point 48, till you have finished plugging the Shaft: So by observing these directions well, you may exactly plum and measure to an Inch, any Shafts, Turns, Lobs or Stumps, that either hade, or hade and underbeat:

*The*

*The Table of the foregoing Operation.*

Ru.	Depth.		Points.		Length.	
	Inch.			Ru.	Inch.	
26.	08.	48.	00.		00.	
12.	10.	48.	00.		18.	
00.	00.	32.	02.		08.	
08.	10.	00.	00.		00.	
00.	00.	32.	00.		23.	

Sum 46. Ru. 28. Inch.

Which converted into Feet makes 94 Foot and 4 Inches; For you must observe, that the 28 Inches, is equal to 1 Rule and 4 Inches, or 2 Foot 4 Inches: So if you divide 94 Foot and 4 Inches by 6, the number of Feet in a Fathom, you will find the Shaft to be 15 Fathoms, 4 Foot and 4 Inches deep: Now if you would know how much the Shaft hades and under-beats, and would find the place above ground where you made the mark last below; First, add the lengths together you took

E 3 upon

upon your square point 48; which here was only 18 Inches: Then putting one end of the Rule to that place of the *Stows* where you first began to plum, lay the *Dial* to the side of the Rule, the Needle standing upon 48; make a mark there: Then add together the lengths you took upon the point 32, which makes 3 Rules and 7 Inches; measure out so much, holding one end in the last mark, let him go forwards with the other, set the Needle upon 32, the string lying streight with the side of the *Dial*, bid him make a mark there, and this is the exact place above ground right over that where you made the mark last below.

*How to plum and dial in an open Rake, where there is many cross drifts and turnings, and afterward to square the same above ground.*

**F**irst plum the Shaft, Turn, Lob, and Stumps if there be any, by the

the directions afore-delivered, chusing that point for your *square* which you judge goes nearest cross to the Rake or Pipe; which suppose here to be 28; and take all your cross lengths upon that point, till such time as you have done plumbing, unless it happen that your Plummets falls upon the end of the Shaft or Turn as you Plum; If so, then take a new square to this square of 28, as you did in the last Example before, or the nearest it you can; setting down the length and points in order: Now suppose you come to take a length forwards into the Drift at the Shaft foot, having first made a mark there where the Plum fell, let a Boy hold one end of the string therein, and bid another man take the Plummets, and go as far back into the Drift as he can, till the plum he hath in his hand touches the

side; and stretching the string streight, observe that it touches no where betwixt that end he holds in the mark and the Plummet the other man hath in his hand, (if it touches the side bid him come nearer) then apply the *Dial* to the side of the string and when the string and *Dial* lie exactly streight together, take the point the Needle stands on, which suppose here to be 44. Set down the point, bid him make a mark at the Plummet: then pull back the string and measure it; which suppose here to be 12 Rules and 14 Inches. Then go to the mark he made hold one end of the string in it, bid him go back into the Drift with the Plummet as far as he can, till the middle of the string begins to touch the side; then stretching the string streight, observe that it touches no where

where betwixt them that hold it, apply the *Dial* to the side of it, and take the point the Needle stands on, which here suppose to be 50; set it down, bidding him make a mark at the Plummet; pull back the string and measure it, which suppose here to be 8 Rules and 6 Inches; which set down over against the point. Then go to the last mark he made, hold one end of the string therein, bid the other go back with the Plummet as far as he can, stretching the string streight, observe that it touches no where on the side betwixt them that hold it; apply the side of your *Dial* parallel to the string, and take the point the Needle stands on, which suppose here to be 48; set it down, bid him make a mark at the end; pull back the string and measure it, which suppose here to be 14 Rules and 8 Inches; then go to that mark, and laying the string

out as before directed, take the point there, which suppose to be 52; set it down, and making a mark at the end, let this be the *Fore-field* of your work: pull back the string and measure it, which suppose to be 16 Rules and 10 Inches: Then go up to the day, and having gone over the lengths and points you took in plumbing the Shaft, and found the mark above ground you made at the Shaft-foot, (which you may do by the Rules and Directions already delivered,) measure out your first length, 12 Rules and 14 Inches, hold one end of the string in the mark, bid the other man go forwards with the Plummet, then do you set the Needle upon 44, (and bid him wave the string to and fro, till it lies exactly streight with the side of the Dial,) the Needle standing upon that point, bid him make a mark there; And so you have

have done your first point; and in like manner you must do all the rest following, till you find the place above ground right over the mark you made at the *Fore-field* below; which done, make a mark, and drive down a *Stake*. Now if you would know how far you are driven in your Meer, you must square the ground above: therefore tie one end of your Cord to this *Stake*, and bid him go cross with the other end, 10, 20, or 30 yards, more or less, as you think good; set the Needle upon 28, which was the square you took when you first began to plum the Shaft, and do you stand in the middle (betwixt him that holds the string, and the *Stake*) with the Dial, bid him move the string to and fro, or do you shift, if you see cause, till the string lies exactly streight, and equally even with the side of the Dial, the Needle

the being precisely upon 28, bid him make a mark at the end, drive down a *Stake* there, and pulling the string streight, fasten it to the *Stake* and leave it; Then come back to the Shaft, having another string ready, put one end to that place of the *Stows* from which you first began to plum, set your Needle upon that point, which is exactly square, to that square you took when you first began to plum the Shaft, which was 28; therefore the point that squares it is 44: then let him go forwards with the string upon that point, till the string he hath in his hand cross the string you fastened betwixt the *Stakes*; go you into the middle, and apply the Dial to the side of the string, bid him move it up and down till the Needle stands exactly upon 44; then bid him make a mark where the strings cross one another, and drive down a *Stake* there; So the

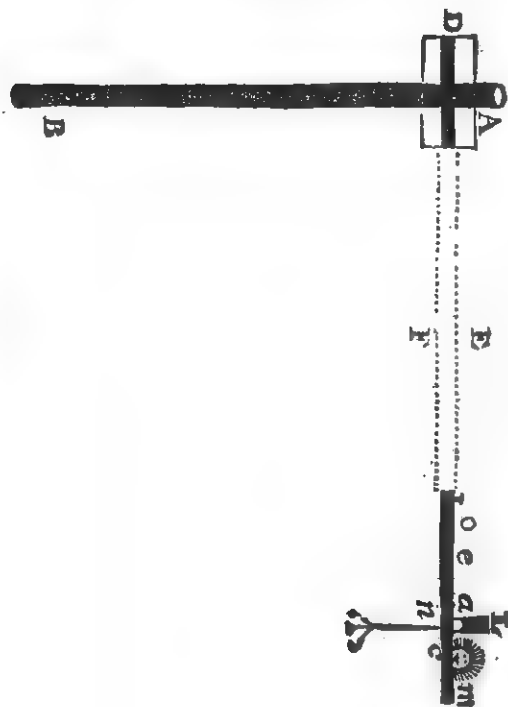
the distance measured from this *Stake* to the *Stows* is the true length of your ground driven.

*How to Plum, and Dial, and bring up Soughs, Drifts, or Addits, to hit any place or depth desired; and to know whether a Sough begun will lay a Mine dry or not.*

**H**AVING first plum'd your Shaft, Turn, Lobs and Sumps by the Rules afore-deliver'd, and knowing the depth thereof: Because few or any Miners understand a *Quadrant*, the Instrument for this purpose may be like this following, *viz.* A Water Stand, with one or more Channels; which the Miner may make himself, upon an old season'd Joycc, cutting a mortise therein a yard long, or more, as his own discretion directs, plaining the same very well and even.

Having





Having the Instrument ready, and a Staff or Pole of 5 or 6 yards long, which you may call the Perpendicular-pole ; as A B presenteth : D the mark levelled at : *m* the Leveller looking over the Channel : *a* the hole above the Channel of Water, through which the Leveller looks : *e* the Chanel full of Water : *o* the pin at the end of the Channel *n* a piece of wood with three Iron-forks at the end, to stick in the ground : L a Board set up cross over the Channel, having a little slit under it, as at *a* : E F the Levelling-Line.

*Suppose you be called to level a piece of ground, to know whether it will lay dry a Mine (by a Songh) that is to be begun in any place appointed:*

First view over the ground, then erect your Instrument at the Mine, and

and cause some one to take the Pole, and go as far towards the place where you intend to begin your Sough, as the length of your Pole will admit; then see that the Water stands even in the Channel. look through the slit at *a*, and bid him shift the Pole to and fro, till you see the pin at *o* interpose your eye and the mark you level at, as *D*: which done, bid him make a mark at the foot of the Pole; and shift your Instrument thither, and erect it there, setting down the length of your Pole in Yards and Inches: Then do as you did before, till you have finished the the whole, and come to the place where you intend to begin your Sough: Then reducing your Poles into Fathoms, compare them with the depth of your Mine, and thus you may know whether it will lay it dry or no.

*Naturam ubiq; compendium amare:*  
Sen-

*Sensibus hac imis (res uon est parva) respoñe.*

Ingraft these Precepts deep within your senses.

The Matter's good, and got by small Expences.

From my Lodging near the *Apothaceries-Hall* in *Black Fryers*, *London*. Feb. 8 1687.

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*F I N I S.*

*The last Operation in Dialling.*

Depth		Points.	Lengths	
Ru.	Inch.		Ru.	Inch.
00.	00.	28.	00.	06.
00.	00.	44.	12.	14.
00.	00.	50.	08.	06.
00.	00.	48.	14.	08.
00.	00.	52.	16.	10.

**A TABLE shewing the CON-  
TENTS of the Articles.**

**1** The first shews, the Constitution of the Bar-Master, and what a Meer of ground contains.

**2.** That every man must free the Old as well as New; that the 13 Dish is the Farmer's lot

**3.** That none shall set on Old Mines in possession without the Bar-Master and Twenty Four.

**4.** That Grooves are no Intail'd Estate but pass by Assignment

**5.** Concerning possessions taken away by theft or other indirect ways.

**6.** The time of laying forth the Miners ground.

**7.** That Crosses and Holes serve but for 3 days, and that Timber and Stows gives the Right.

**8.** That the Miner shall chase on his Meer.

**9.** That the Bar-master ought to give warning, or nick the Stows, before he gives the ground away.

**10.** What is to be done when two or more set Stows for one Meer in a Rake:

**11.** That the Farmer shall provide impartial Dishes.

**12.** That

12. That Smytham nor Forested Ore pay no Duties.

13. The Miners Liberties, and Timber from the Waits.

14. The Miners shall have ways to their Grooves.

15. Concerning Fatts and Sieves.

16. What ground may be digged in.

17. That none shall keep false Gages.

18. What may be done when the Bar-master neglects coming to measure.

19. The measure to be made, and the penalty of shaking the Dish.

20. What Cope is, and for what paid.

21. That if any man claim, he ought to arrest, and the Dish to be bound with Sureties.

22. That a Court is to be held within ten days, upon request.

23. That Pawns shall be put in, or no Plea.

24. That two great Courts be kept.

25. That the Defendant shall have six days before any Court.

26. That the Ore got after arrest is liable to the Trial.

27. What men, and from whence, shall serve for Jurors.

28. That Maintainers as well as Miners shall serve.

29. What

29. What Verdicts for wages, and to prove Interest shall suffice.

30. The time of arresting after Trial.

31. That none shall sue for Mineral Rights but in *Barmoor-Court*.

32. That no Bailiff or Officer shall serve Writs or Warrants on the Mine.

33. What is to be done when any refuseth to maintain.

34. Concerning Water-Mines, Soughs and Engines.

35. When any hath found the Vein, they ought to direct the next Taker.

36. What is to be done when one possesses the Front of anothers Mine.

37. That the first Workman shall work, and the Claimer arrest.

38. The liberty he hath that finds a *Pec*.

39. How two Veins may be known.

40. The time of firing.

41. Concerning trespassing in anothers ground.

42. The penalty of those that fill up other mens Grooves.

43. That none shall pass away parts in variance for maintenance.

44. Who shall enquire of Mineral homicide.

45. Con-

45. Concerning Weapons, and drawing Bloud upon the Mine.

46. The Liberty of Wash-troughs.

47. Concerning Caving on the Mine.

48. Concerning Fellony.

49. That Stocks ought to be kept on the Mines.

50. Concerning not appearing at the *Barmoot-Court*.

51. What the 24 may do, when called to view Mines in controverſie.

52. That none ſhall hinder the 24 from doing their Office.

53. That the Bar-maſter ought to collect all Fines and Forfeitures.

54. That if any will make claim, he ſhall do it within ſix months after workmanſhip.

55. Concerning putting in pawes and taking parts on both ſides.

56. Concerning ſuing for wages.

57. Concerning putting in a Bill of Complaint.

58. That none ſhall hinder the 24 from Dialling.

59. That all perſons ſhall put up their Bills while the Court ſits.

The

## The Contents of the ſecond Book.

1. **T**He form of a Bill of Complaint at the Great *Barmoot-Court*.

2. The form of a Croſs bill at the ſame Court.

3. The Jurors Verdict upon the aforeſaid Bills.

4. The form of a Bill at the ſmall *Barmoot-Court*.

5. The Jurors Verdict upon that Bill.

6. The form of a Bill put to the 24, when called to view a Mine in queſtion.

7. Of Dialling and Levelling in general.

### E R R A T A:

Page 3. line 9. for *reſera* read *reſera*. pag. 25. line 2. for *cepired* read *expired*. Art. 41. line 1. for *Mines* read *miners*. Art. 46. line 3. for *foorts* r. *foots*. p. 85. l. 21. for *conveted* r. *converted*. p. 86. l. 4. for *26*. r. *46*.

## ADVERTISEMENT.

**N**OT long since having business (upon the account of Mines) to ride over the west of England, and chiefly the Counties of Devonshire and Cornwall: This is therefore to let all persons know, (whose inclinations directs them to deal in Mines) That there is three Mines in the Counties aforesaid, which (if prudently and well managed) might yield great advantage and profit to the Undertakers: They are 20 or 30 miles distant one from another. Here follows a brief account of one.

'Tis an Old Mine not wrought since the memory of man; It had formerly an Addit or Sough brought up to it, (but no one knoweth how long since) which is yet to be seen: This Water-pipe was cut all open work to the Grass, and when it was brought up to the Mine was six or seven yards deep and in length about a hundred; being more like a Ditch than a Sough: 'Tis not wrought above 8 or 9 fathoms deep: There might be a Sough brought up (with reasonable charge) to lay it dry 14 or 15 fathoms. 'Tis good Ore, which yields some Silver: When it was last wrought it was for Refining. Any that desires to know further of it may hear of me at the Paracelsus, a Chymist in Old Fishstreet, London.

# AN EXPLANATION OF THE MINERS Terms of Art

Used in this

## B O O K.

**B***Ar-master* is he which keepeth the Gage or Dish to measure all Miners Ore, he or his Servant being present when measured.

*Erazen-Dish* is the Standard by which the other Dishes are gaged, and is kept in the King's Hall.

*Cavers* are any poor people that go about the Mines to beg or steal Ore from the Miners.

F

Coe!

### *An Explanation of*

*Cotes* are little Houses which the Miners make over their Mines to lay the Ore in.


*Cope* is 6d. for every Load of Ore, nine Dishes making one Load.

*Crosses* are two Nicks cut on the Superficies of the Earth, thus ✚ which the *Miners* make when they take the Ground to dig for Ore; This Cross gives the *Miners* three days liberty to make and set on *Stows*: As many of these *Crosses* as the *Miner* makes, so many *Meers* of Ground he may have in that Vein, if he set on *Stows* within three days after the making his *Cross* or *Crosses*; but if he make but one *Cross*, and a *stander* by makes the second, and a stranger makes the third, every one is served with the next Meer, according as they have first or last, sooner or later made their *Cross* or *Crosses* upon the Ground.

*Dish*

### *the Miners Terms of Art.*

*Dish* is a Trough made of Wood, about 28 Inches long, 4 Inches deep and 6 Inches wide; by which all *Miners* measure their Ore: If any be taken selling their Ore, not first measuring it by the Bar-masters Dish, and paying the Kings Duties, the *Miners* incur that forfeiture which the 17th. Article has imposed upon them.

*Drift* is a passage thus  cut out under the Earth betwixt Shaft and Shaft, or Turn and Turn, or a passage or way wrought under the Earth to the end of a Meer of ground or part of a Meer.

*Farmer* is the Lord of the Field; or one that farms the Lot and Cope of the King.

*Fodder of Lead* at the Mines contains Twenty two hundred and a half weight, though in *London* but Twenty hundred weight.

F 2

*Forest id*

### *An Explanation of*

*Forestid Ore* is Ore that is gotten out of Earth and Dirt that hath been washt and Ore taken from it before.

*Forfield* is the furthest place that a man has wrought in his ground ; or the end of a Meer above-ground.

*Groove* is the Shaft or Pit sunk into the Earth; they are sometimes sunk in the Vein and sometimes out.

*Hack* is a Tool that *Miners* use like a Mattock.

*Hade* is where any Shaft or Turn goes descending like the side of a House, or like the descent of a steep Hill, then it is said to hade.

*Load* is nine Dishes of Ore ; each Dish being about half a hundred weight.

*Lobs* are steps that ascend or descend within the Mines, as stairs up to and down from a Chamber.

*Lot* is the 13<sup>th</sup>. Dish, Measure or Part of the *Miners* Ore, which the Bar-master takes up for the King or the Farmer.

*Meer*

### *the Miners Terms of Art.*

*Meer* contains Twenty nine yards in length in any Vein:

*Meer-stake* is a pin of wood drove into the superficies of the Earth, to shew the extent or end of a Meer of ground.

*Old works* are such that are either fallen in or stand unwrought:

*Pipe* is where the Ore runs forwards endways in a hole, and doth not sink downwards or in a Vein.

*Pee* is where two Veins meet and cross one another thus ✕ the place where they meet is called the *Pee*.

*Possession* is the right to a Meer of ground, which *Miners* enjoy, by having Stows upon that ground; and it is taken generally for the Stows themselves; For it is the Stows that give Possession.

*Pawn* is a Pledge of Money put into the Bar-masters hand at the time when the Plaintiff causes the Bar-master to arrest the Mine.



*An Explanation of*

*Pick* is a Tool the Miners use to cut down the Cliffs and Rocks of Stone to make passages in the Earth.

*Rither* is a Stone or thin Cliff that lies in the Vein; The Ore sometimes runs on both sides it; Sometimes this Rither is so thick, it parts the Vein and makes one Vein two.

*Quarter-Cord* is seven yards and a quarter, which the *Miner* hath cross ways of his Vein on either side; for liberty to lay his Earth, Stones and Rubbish on, and to wash and dress up his Ore.

*Rake* is the same with a Vein.

*Shaft* is the same with a Groove or Pit; They are sunk some ten some twenty Fathoms deep into the Earth, more or less.

*Stows* are seven pieces of Wood (set upon the superficies of the Earth) fastened with pins of wood together; Two are called *Soul-trees*; two  
Stow-

*the Miners Terms of Art.*

*Stow-blades*, two *Hang-benches* and a *Spindle*: These *Stows* give a *Miner*, or any person that owns them, as good right to a Meer or Meers of ground, (so that every Meer have a pair of *Stows* set on them) as a Deed of Conveyance doth to any Purchaser.

*Stool* is where the *Miners* leave digging deeper, and work in the ends forwards; the end before you is called the *Stool*.

*Spindle* is a piece of wood fastned into either *Stow-blade*.

*Smytham* is Lead Ore stamp'd and pounded down, like Powder or Sand, to cleanse the Stones and Earth from the Ore.

*Sough* is also called an *Addit*; It is a passage like a Vault cut out under the Earth, to drain the water from the Mines.

*Smelting-house* is a House where they run and melt the Ore into Lead;

### *An Explanation of*

**Lead**; One of these will run a Tun in ten or twelve hours; A Fodder is their usual days work; that is, Twenty two hundred and an half weight.

**Sumps** are holes sunk in *Drifts* to the depth of two or three yards, more or less.

**Twenty four men**, they are Twenty four men chosen every half year to redress the grievances of the *Mines* and *Miners*; But every man generally serves his year when chosen.

**Next Taker** is he that makes the next cross, or he that hath the next Meer in possession.

**Turn** is a Pit sunk in some part of a Drift; If the *Mine* be deep, there is many of these *Turns* one below another.

**Vein** is that which is bounded with *Woughs*, and contains *Ore*, *Spar*, *Cauck*, *Clay*, *Chirt*, *Croil*, *Brown-hen*, *Pitcher-chirt*, *Gur*, which the Philosophers

### *the Miners Terms of Art.*

phers calls the Mother of Mettals, and soil of all colours sometimes. When it bears Ore it is called a quick *Vein*, when no Ore a dead *Vein*.

**Woughs** are the Walls or sides sometimes of hard stone, and sometimes soft; when soft, then the *Miners* say they are rotten: These are the bounds of an entry. Betwixt them all sorts of Earth, Stones and Ore lieth, or, as Philosophers say, groweth.

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*The End of the Explanation.*

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